

Thursday, June 09, 2016 8:46:21 AM

147513

Page 1

N900040100

Setup Start *NS1*

Stop *NS2*

Start Date: 5/27/2016 **Start Qty:** ~~5.00~~ 7

~~*5*~~
~~*5*~~ 72m

Cust Item ID:

Required Date: 6/8/2016 **Req'd Qty:** 5.00 *LM*

Customer:

Reference:

Approvals: **Process Plan:** MCS

Date: JUN 17 2016

Tooling: _____ Date: _____

QC: _____ Date: JUN 17 2016 SPC (Y/N): _____ Date: _____

Run Start *NR1*

Stop *NR2*

100	Skidtubes	0.00				
100						
Skidtubes						
Skidtubes	Memo 1-Cut to length as per Dwg D3282. 2- inspect for surface damage as per QSI0018 3- Debur	0.12				
110	HAAS CNC VERTICAL MACHINING #1	0.10				
110						
HAAS 1						
HAAS CNC vertical machine #1	Memo 1-Machine as per Folio FA579 & Dwg D3282 2-Debur	0.53				
120	QC2- Inspect parts off machine FAI/FAIB	0.00				
120						
QC						
Quality Control	Memo	0.01				

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					

Work Order ID 147513

Thursday, June 09, 2016 8:46:21 AM

147513

Page 2

Item ID: D3282-041 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Float Web (206L/407)
Start Date: 5/27/2016 Start Qty: 5.00 ***5*** Cust Item ID:
Required Date: 6/8/2016 Req'd Qty: 5.00 ***5*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

130 QC8- Inspect parts - second check 0.00

130

QC

Memo

0.02

Quality Control

D. 16/09/25

7

φ

DAS
08
9-89

140 Chemical Conversion Coat per QSI005 4.1 0.00

140

HandFinish

Memo

0.19

Hand Finishing

(x7)

φ

2016/09/29
BEB

150 QC7-Inspect Chemical Conversion Coat 0.00

150

QC

Memo

0.00

Quality Control

DAS
03
9-89

(7)

φ

16-11-14

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : _____					

Thursday, June 09, 2016 8:46:21 AM

Page 3

LOCATION : LG002

⑦ ~~10-11-14~~

① 16-11-16 DA⁹
9
9-89

⑦ 12 16-11-16

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
								Completed By	
								Lead hand / Supervisor Approval Verification	
						QC / QA Coordinator Approval			

Root Cause			FAULT CATEGORY							
Environment	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong
Design	☐	Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions
Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance
Equip/Tooling	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing
Material	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved
Internal Transport	☐	Poor Information	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing
Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish
LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread
Substation	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence
Past Expiry Date	☐	Manufacturing Process	☐	OTHER : _____						
Misidentified	☐	Past Due	☐							

Work Order ID 147513

Thursday, June 09, 2016 8:46:21 AM

147513

Page 4

Item ID: D3282-041 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Float Web (206L/407)
Start Date: 5/27/2016 Start Qty: 5.00 ***5*** Cust Item ID:
Required Date: 6/8/2016 Req'd Qty: 5.00 ***5*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
190	QC21- Final Inspection - Work Order Release	0.00							
190									
QC	Memo	0.08							
Quality Control									

DAS
21
9-88
NOV 16 2016

DAS
21
9-88
NOV 16 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By _____ Lead hand / Supervisor Approval Verification _____ QC / QA Coordinator Approval _____		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
		OTHER : _____							

Picklist Print

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Page 1

Work Order ID: 147513

147513

Parent Item: D3282-041

D3282-041

Parent Item Name: Float Web (206L/407)

Start Date: 5/27/2016

Required Date: 6/8/2016

Start Qty: 5.00

Required Qty: 5.00

Comments: IPP Rev:B05.09.23Procedure changeKJ/JLM IPP REV:C 11.09.20
remove LPS as per dwg revD DD verf:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D2792-130 *D2792-130* EXTRUSION		Manufactured	No			100	Each	60.0000	1	5			
										**	16-8-25 M.G		

Location	Loc Qty	Loc Code
HALL	60	
12219	8	
128109	52	

D3283-1 *D3283-1* Doubler		Manufactured	No			160	Each	57.0000	2	10			
										**	16-11-14		

Location	Loc Qty	Loc Code
LG001	57	
126289	57	

MS20470AD4-7 *MS20470AD4-7* Rivet, Universal Head		Purchased	No			160	Each	3,786.000	57	285			
										**	16-11-14		

Location	Loc Qty	Loc Code
CCK004	2792	
m134376	1396	
m134630	1396	
ST310	994	
m132536	994	

Handwritten notes and signatures:

- 16-8-25 M.G
- 16-11-14
- 14
- 16-11-14
- 399

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

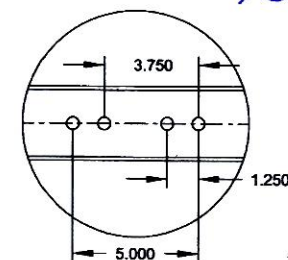
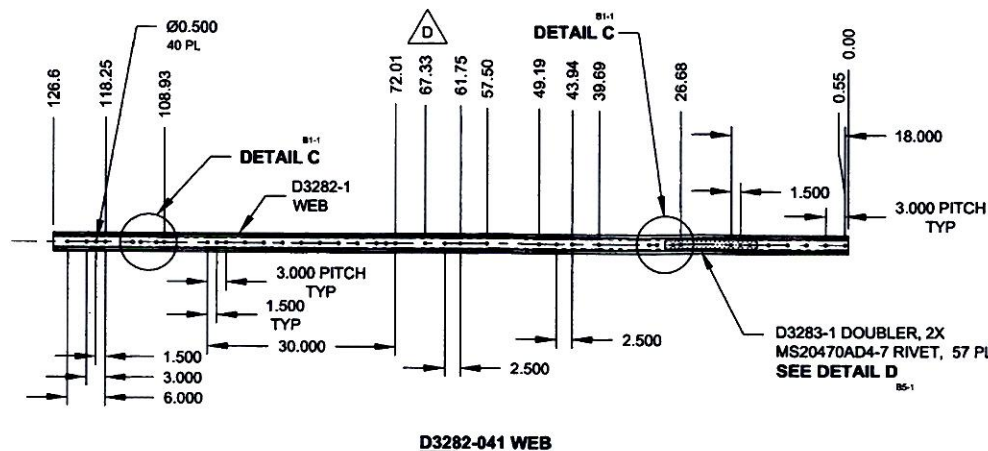
QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐								
Misidentified ☐	Past Due ☐	OTHER :							

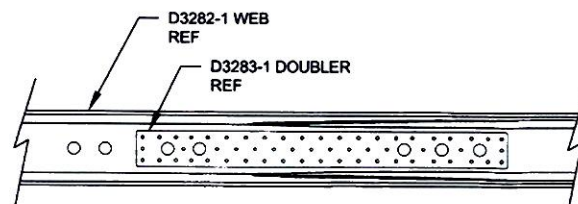
SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER

147513 MJS
16-06-10



DETAIL C
DS-1
DS-1

NOTE: RIVET HOLES/DOUBLER
NOT SHOWN FOR CLARITY



DETAIL D
CA-1

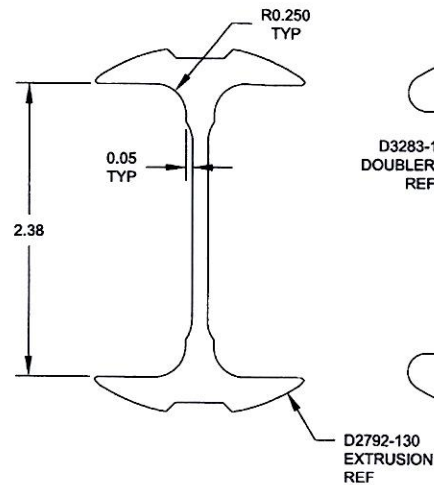
- NOTES:
- 1) MAKE D3282-1 WEB FROM D2792-130 EXTRUSION
 - 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK ALL SHARP EDGES 0.010 TO 0.020
 - 6) IDENTIFICATION: IDENTIFY WITH P/N "D3282-041" PER QSI 044 6.1 (FINE POINT PERMANENT INK MARKER)
 - 7) WEIGHT: 20.0 lbs
 - 8) SEE PAGE 2 FOR MACHINING DETAILS

RELEASED
2011-09-12

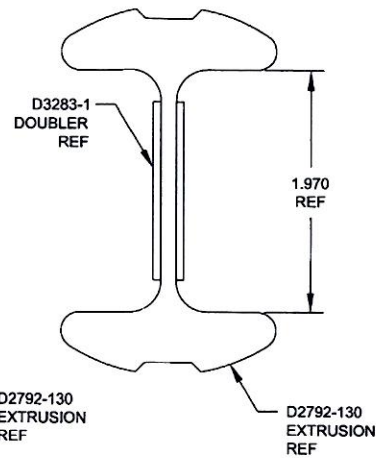
D	ADD ADDITIONAL HOLE (ZN D6-1); REMOVE LPS-3 (ZN C3-1)	SC	11.05.05
C	REMOVE D3390-1, NOW MACHINED	CP	05.08.09
B	MOVE HOLES, ADD D3390-1 DOUBLERS	CP	05.03.16
A	NEW ISSUE	CP	04.05.05
REV.	DESCRIPTION	BY	DATE
DESIGN	CP	DART AEROSPACE USA, INC PORT HADLOCK, WA	
DRAWN	SC		
CHECKED	98	DRAWING NO.	REV. D
MFG. APPR.	10	D3282	SHEET 1 OF 2
DE APPR.	14	TITLE	SCALE
DATE	11.05.05	WEB	NTS
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8 7 6 5 4 3 2 1

SECTION A-A

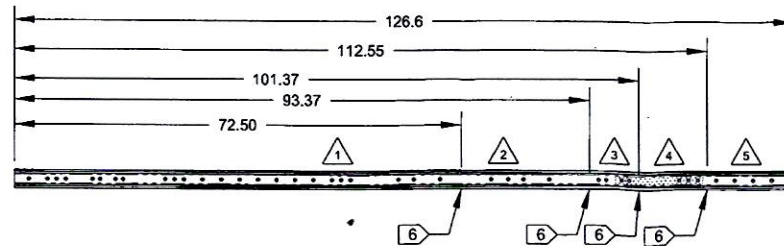


SECTION B-B



D3282-1 MACHINING NOTES

- 1 UNIFORM SECTION A-A
- 2 UNIFORM TAPER FROM SECTION A-A TO SECTION B-B
- 3 UNIFORM SECTION B-B
- 4 UNIFORM TAPER FROM SECTION B-B TO SECTION A-A
- 5 DRILL #30 (Ø0.128 REF) HOLES (57 PLACES) TO LINE UP WITH D3283-1, SEE DETAIL D FOR REFERENCE
- 6 UNIFORM SECTION A-A
- 6 R1.00 BETWEEN SECTIONS



RELEASED
2011-09-12
NP

DESIGN	CP	DART AEROSPACE USA, INC	
DRAWN	SC	PORT HADLOCK, WA	
CHECKED	GP	DRAWING NO.	REV. D
MFG. APPR.	GP	D3282	SHEET 2 OF 2
APPROVED	GP	TITLE	SCALE
DE APPR.	GP	WEB	NTS
DATE	11.05.05	COPYRIGHT © 2004 BY DART AEROSPACE USA, INC THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

8 7 6 5 4 3 2 1

DART AEROSPACE LTD		Work Order: 147573
Description: Float Web		Part Number: D3282-041
Inspection Dwg: D3282	Rev: D	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
126.6	+/-0.100	126.600	✓		MIP-07	Tape
1.500	+/-0.010	1.500	✓		MIP-04	vern
3.000	+/-0.010	3.000	✓			
6.000	+/-0.010	6.000	✓			
1.250	+/-0.010	1.250	✓			
30.000	+/-0.010	30.000	✓			
1.500	+/-0.010	1.500	✓			
72.01	+/-0.030	72.01	✓			
61.75	+/-0.030	61.750	✓			
57.50	+/-0.030	57.500	✓			
49.19	+/-0.030	49.190	✓			
43.94	+/-0.030	43.940	✓			
39.69	+/-0.030	39.69	✓			
26.68	+/-0.030	26.68	✓			
0.55	+/-0.030	0.535	✓			
1.970	+/-0.010	1.970	✓			
2.38	+/-0.030	2.377	✓			
0.05	+/-0.030	0.075	✓			

Measured by: DAS 33	Audited by: DAS 08	Preliminary Approval:
Date: 11/09/22	Date: 16/09/25	Date:

Rev	Date	Change	Revised by	Approved
A	07.04.02	New Issue	KJ/JLM	
B	12.02.01	Dwg Rev updated	KJ	